

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 15, 16, 19, 21, 24, 25, and 28 are pending in the application, with claims 15, 21, and 25 being the independent claims. Claims 1-14 were previously canceled. Claims 17, 18, 20, 22, 23, 26, and 27 are currently cancelled without prejudice to or disclaimer of the subject matter therein. Claims 15, 19, 21, and 25 are currently amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

***Double Patenting Rejection***

In section 3 of the Office Action, claims 15-28 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,681,255. Applicants have included herewith a terminal disclaimer in compliance with 37 C.F.R. § 1.321(c) to obviate the double patenting rejection.

Thus, Applicants request that this rejection be reconsidered and withdrawn and that claims 15-28 be passed to allowance.

***Rejections under 35 U.S.C. § 102***

**Claims 15-28**

In section 6 of the Office Action, claims 15-28 were rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,560,243 to Mogul (hereinafter Mogul). Applicants respectfully traverse this rejection.

Independent claim 15 as amended recites, among other features, calculating the wait time according to the equation  $\text{wait time} = (\text{bytes}_{\text{AGG}})/B_T - (T_{\text{NOW}} - T_{\text{START}})$ .

Mogul describes a system and method for receiver based allocation of network bandwidth. In Mogul, a sender transmits a flow of data packets to a receiver, and the receiver responds by sending acknowledgement packets to the sender. Mogul, Col. 4, lines 11-17. Mogul describes two embodiments in which a target bandwidth may be achieved. However, nothing in Mogul teaches or suggests calculating the wait time according to the equation  $\text{wait time} = (\text{bytes}_{\text{AGG}})/B_T - (T_{\text{NOW}} - T_{\text{START}})$ , as set forth in Applicants' claim 15, as amended. In fact, Mogul teaches away from this feature.

For example, in the first embodiment described by Mogul, the rate at which the transmitted data from the receiver arrive at the sender determines the rate at which the sender transmits the subsequent data packets. Mogul, abstract. In this embodiment, the receiver calculates a delay factor, D, that will cause subsequent data transmissions by the sender to be delayed appropriately to achieve the target bandwidth allocated to the flow. Conceptually, the receiver uses a model function,  $M(F, T, P)$ , for predicting the bandwidth consumed by a given flow F, at time T, given a set of parameters P. The parameter set P includes the round-trip time between the sender and the receiver, the segment size being used, the size of the sender's congestion window, and perhaps other

information about the flow F and the state of the network. The parameter set P also includes the calculated delay factor, D, which is the period of time that each acknowledgement for flow F is delayed. That is, if the most recent acknowledgement for flow F was sent by the receiver M seconds ago, and under normal circumstances the next acknowledgement is due to be transmitted, that next acknowledgement is delayed instead for  $M^*(D-1)$  seconds. Mogul, Col. 7, lines 21-37.

Applicants assert that delaying the next acknowledgement for  $M^*(D-1)$  seconds is not the same as, and in fact teaches away from, calculating the wait time according to the equation  $\text{wait time} = (\text{bytes}_{\text{AGG}})/B_T - (T_{\text{NOW}} - T_{\text{START}})$ , as set forth in Applicants' claim 15, as amended.

In the second embodiment described by Mogul, the receiver indicates to the sender the sequence number of the acknowledged byte of data and the amount of data the receiver is willing to accept from the sender, called an "advertised window". Mogul, abstract and Col. 4, lines 35-39. From this information, the sender determines the highest byte sequence number that can be transmitted. The sender is not permitted to send data beyond the highest bit sequence number that can be transmitted until the sender receives another acknowledgement from the receiver that increases its advertised window. Mogul, Col. 4, lines 40-45.

Applicants assert that denying permission to send data beyond the highest bit sequence number that can be transmitted until the sender receives another acknowledgement from the receiver that increases its advertised window is not the same as calculating the wait time according to the equation  $\text{wait time} = (\text{bytes}_{\text{AGG}})/B_T - (T_{\text{NOW}} - T_{\text{START}})$ , as set forth in Applicants' claim 15, as amended.

For at least the reasons set forth above, Applicants respectfully request reconsideration and withdrawal of the rejection of independent claim 15.

Independent claims 21 and 25, both as amended, also distinguish over Mogul for reasons similar to those set forth above with respect to independent claim 15, as amended, and further in view of their own respective features.

Furthermore, claims 16 and 19, which depend from independent claim 15, claim 24, which depends from independent claim 21, and claim 28, which depends from independent claim 25, also distinguish over Mogul for reasons similar to those set forth above with respect to independent claim 15, and further in view of their own respective features.

Claims 17, 18, 20, 22, 23, 26, and 27 have been cancelled, rendering the rejection of these claims moot.

Therefore, Applicants respectfully request that the § 102 rejections be reconsidered and withdrawn.

#### ***Rejections under 35 U.S.C. § 103***

##### **Claims 15-28**

In section 6 of the Office Action, claims 15-28 were rejected, in the alternative, under 35 U.S.C. §103(a) as being allegedly obvious over Mogul. Applicants respectfully traverse this rejection.

The Office Action fails to establish a *prima facie* case of obviousness for at least the reason that Mogul does not teach or suggest each and every feature of the claims. For example, as described above, nothing in Mogul teaches or suggests calculating the

wait time according to the equation wait time = (bytes<sub>AGG</sub>)/B<sub>T</sub> - (T<sub>NOW</sub> - T<sub>START</sub>), as set forth in Applicants' claim 15, as amended. In fact, Mogul teaches away from this feature.

Moreover, the Office Action fails to establish a *prima facie* case of obviousness for at least the additional, independent reason that the Examiner fails to show where the prior art contains the suggestion or motivation to modify the invention of Mogul to include calculating the wait time according to the equation wait time = (bytes<sub>AGG</sub>)/B<sub>T</sub> - (T<sub>NOW</sub> - T<sub>START</sub>), as set forth in Applicants' claim 15, as amended.

In section 12 of the Office Action, the Examiner alleged, "[i]t would have been obvious to one skilled in the art at the time of the invention that bandwidth calculations [are] usually based on bytes count and time, and different computations *can* be done in any number of ways using these parameters: bandwidth, bytes count and time"

(*emphasis added*). In section 19 of the Office Action, the Examiner further alleged:

[I]t would have been obvious to one skilled in the art that, the period of time between the last ACK sent by the receiver (start time) and what the new ACK should be, *can* be calculated by (bytes count / target bandwidth) in order to control the bandwidth.... The delay or the wait time, *can* be calculated, then, as (bytes count / target bandwidth[]) - (current time - start time).

(*emphasis added*)

However, "the mere fact that references can be combined or modified does not render the resulting combination obvious unless the prior art also suggests the desirability of the combination." See M.P.E.P. § 2143.01 "Fact that References can be Combined or Modified is not Sufficient to Establish *Prima Facie* Obviousness," at page 2100-137. "Although a prior art device 'may be capable of being modified to run the

way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *Id.*

Here, the rejection amounts to a statement that it was possible to do what the Applicants did. Surely, the Applicants must agree with that because, in fact, they did do it. For example, the Examiner's arguments that different computations can be done in any number of ways using these parameters: bandwidth, bytes count and time, that the period of time can be calculated by (bytes count / target bandwidth), or that the delay or wait time can be calculated as (bytes count / target bandwidth) - (current time - start time) may be true, but are irrelevant to the obviousness determination. As explained in the M.P.E.P., the fact that Mogul can be modified is irrelevant, absent some teaching of the desirability to do so. It is the teaching of the desirability to do so which is clearly absent in the Examiner's proposed modification. Therefore, the Examiner's argument cannot stand.

For at least the reasons set forth above, Applicants assert that independent claim 15, as amended, is patentable over Mogul.

Independent claims 21 and 25, both as amended, are also patentable over Mogul for reasons similar to those set forth above with respect to independent claim 15, as amended, and further in view of their own respective features.

Furthermore, claims 16 and 19, which depend from independent claim 15, claim 24, which depends from independent claim 21, and claim 28, which depends from independent claim 25, are also patentable over Mogul for reasons similar to those set forth above with respect to independent claim 15, and further in view of their own respective features.

Claims 17, 18, 20, 22, 23, 26, and 27 have been cancelled, rendering the rejection of these claims moot.

Therefore, Applicants respectfully request that the § 103 rejections be reconsidered and withdrawn.

***Conclusion***

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Bryan S. Wade  
Attorney for Applicants  
Registration No. 58,228

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1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

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